

CLAIMS

1. Tracking system for guiding an optical beam on tracks on an information carrier, said tracking system comprising a photodetector (A1, A2) for detecting optical beams derived from said optical beam, said photodetector generating a first output signal (A) and a second
5 output signal (B), said tracking system comprising first processing means for generating a first differential signal (PP(DC)) corresponding to the low-frequency part of a difference between said first and second output signals, **characterized in that** said tracking system comprises second processing means for generating a tracking error signal (PP(AC/DC)) defined by the addition of said first differential signal (PP(DC)) to a second differential signal
10 (PP'(AC)), said second differential signal corresponding to a fraction of the difference in amplitude of the high-frequency components of said first and second output signals.
2. Tracking system as claimed in claim 1 comprising adjusting means for adjusting the value of said fraction to a value which minimizes a merit function (F1, F2), said merit
15 function being a function of a first parameter (R) and a second parameter (V), said first parameter (R) corresponding to the ratio between the amplitude of said first differential signal (PP(DC)) in an area with only unwritten tracks and the amplitude of said first differential signal (PP(DC)) in an area with only written tracks, said second parameter (V) corresponding to the difference in amplitude of said first differential signal (PP(DC)) between
20 two adjacent tracks of which one is written and the other is unwritten.
3. A method of tracking for guiding an optical beam on tracks on an optical disc, said method comprising a photodetection step for detecting optical beams derived from said optical beam, said photodetection step generating a first output signal (A) and a second
25 output signal (B), said method comprising a first processing step for generating a first differential signal (PP(DC)) corresponding to the low-frequency part of a difference between said first and second output signals, **characterized in that** said method comprises a second processing step for generating a tracking error signal (PP(AC/DC)) defined by the addition of said first differential signal (PP(DC)) to a second differential signal (PP'(AC)), said second

differential signal corresponding to a fraction of the difference in amplitude of the high-frequency components of said first and second output signals.

4. A method of tracking as claimed in claim 3 comprising an adjusting step for adjusting
5 the value of said fraction to a value which minimizes a merit function (F1, F2), said merit function being a function of a first parameter (R) and a second parameter (V), said first parameter (R) corresponding to the ratio between the amplitude of said first differential signal (PP(DC)) in an area with only unwritten tracks and the amplitude of said first differential signal (PP(DC)) in an area with only written tracks, said second parameter (V)
10 corresponding to the difference in amplitude of said first differential signal (PP(DC)) between two adjacent tracks of which one is written and the other is unwritten.
5. Apparatus for reading data on an optical disc, said apparatus comprising a tracking system as claimed in claim 1.
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6. Apparatus for writing data on an optical disc, said apparatus comprising a tracking system as claimed in claim 1.